MODULE 7: Lesson Plans

Performance Objectives for Module 7

1. Given information in this module the student will develop a performance objective with accompanying enabling objectives. The development will be considered successful if the performance objective contains the required three components and enabling objectives are appropriate for the performance objective the student can answer 80% or better of the questions on a written examination correctly and complete the activity at the end of this module.
2. Given information in this module and course the student will develop a lesson plan. The development will be considered successful if the lesson plan contains all the components as required in this course and the student can answer 80% or better of the questions on a written examination and complete the activity at the end of this course. Information in this module will help you to tie all the bits and pieces together into a whole. Previous modules have given you some basic information you need, and now you will pull it together to help plan your teaching process.

Introduction for Module 7

In all of the literature, no two educators agree completely on the content and form of a lesson plan; however, the one point they all agree on is all teachers need to do some form of lesson planning.

Why is daily lesson planning so vital to the teaching process? Imagine a cook in the kitchen, without a plan for a meal it is doubtful the meal will be well served. Attempting to create an edible meal requires knowing when the meal is to be served and how much time each item needs to cook before beginning the process. Recipes are required to show how each item will be prepared. The recipes indicate time, quantities, instructions, and order of adding ingredients to guide the cook toward a quality product. The entire product of the meal must be nutritionally balanced and consideration of nutrition in each dish must be made. In other words, advanced planning will mean the difference between success and failure. As expertise is gained, the advanced planning

becomes less obvious to an onlooker, but it continues to be an essential component of the process.

In order to develop a plan you have to think through 1) where are you going with the educational effort 2) how are you going to get there and 3) how will you know when you have arrived. In addition, through good planning you can anticipate problems and plan to eliminate or overcome them. You have probably had the experience of studying for an examination and feeling you really knew the material-that is until you were asked to use it on the test. At this point, you realized you were just aware of the material. When you have explained material to someone else, an in-depth comprehension of the material is needed; this takes careful planning, and though the planning process one really masters the material. Planning also allows you to anticipate what your needs will be for supplies, tools, equipment, and other support materials. All of these organizational efforts are ultimately a time saver. As you plan on paper, you will weed out the extraneous and save the essential.

In your classroom, your plan serves as a guide during presentations. the fact that you lesson is well planned will give you confidence, give your students a sense of security, and give your lesson a sense of purpose and direction.

Finally, since daily lesson plans grow out of overall educational plans, the daily plans help keep you on track in the overall goals of the education, thus providing for continuity in the course and in student learning.

What is a Lesson Plan?

A lesson plan is simply stated, clearly written, flexible, and individualized teachers' aid for conducting a class. It is individualized in two senses: (1) it is based on the individual needs, interests, and abilities of the students; and (2) it is formatted according to the goals, needs, and style of the teacher. A lesson plan must be flexible so if you come to one of those great teaching moments, you will be able to change the plan around for the overall course, then come back to what you may have missed during that time. That way the information you skipped because of the teachable moment will not be forgotten or skipped over.

Although forms for writing lesson plans vary, basically there are three major sections to each plan. First, the lesson approach, second the lesson development, and third, the lesson summary. In addition, lesson plans usually include some preliminary information. The first lesson plan for a class is a time consuming, difficult, thought provoking endeavor. However, once you have a plan completed you will have a valuable tool to use and modify for future classes. You and your students will greatly benefit from your thoughtful development of a plan.

Preliminary Information

Somewhere at the top of your lesson plan, you need to identify certain information. Various forms have you list the subject being taught, the date the plan will be used, unit title, and the title of the lesson, the hour or period the class meets, and teacher's name. How much of this information you specify will depend upon your needs. A teacher responsible for several subjects may wish to specify the subject. A teacher responsible for teaching the same subject to various classes may wish to specify which class.

Lesson Approach

The critical components in the lesson approach section of planning are the performance objectives and the lesson introduction. The performance objectives are the goals of the educational effort and will be addressed in this module. Enabling objectives will accompany the performance objectives and they are the specifics required to get to the overall objective. Students can and should be involved in selecting the enabling objectives for your plan.

Introduction of the Lesson

In the introduction component of your lesson plan, you determine how you will acquaint your students with the specified objectives for the lesson. One major purpose of the introduction is to orient student to what the objectives of the lesson are, how the lesson relates to them, how the lesson relates to their past classroom activities and what will be expected of them. Tow other functions of the introduction are to get the attention of the students and to motivate them sufficiently to hold their attention. There are various

methods which can be sued to achieve these purposes. You can tell an interesting related story or anecdote, give a brief demonstration, ask provocative questions, or show a piece of equipment related to the instruction. Preferably, students should be involved in some way, by suggesting answers to the provocative questions, assisting in the demonstration, sharing their related experiences, or some other form of student-teacher interaction.

Announcements are items of business not related to the lesson content. A meeting, or a change in a meeting time of the next class period, a visit by the governor, the due date of independent projects, etc. To make sure the items get mentioned, and to make sure valuable class time is not taken up with interruptions, any announcements should be written into the lesson plan and scheduled for a particular time during the class period. A designated time before the lesson begins, or just after the summary ends is good for this type of business. Where ever you decide to include this information it should be written into the lesson plan.

Performance Objectives

An example of student involvement in development of performance objectives would be if your objective is to teach the reasons for taking a blood pressure, a group of students who have experience in health care will not need the same educational plan as students who have no experience in health care. You can gain this information through discussion, pre-tests, or prior knowledge of student background levels.
Based on the student input, you are able to write specific objectives for the daily lesson plans designed to meet student needs. Objectives should be stated in terms of an individual, generic, student, not the teacher. You do not state what you will do as the teacher, but what the student will be able to do as a result of the instruction. Your objective is not to explain why to take a blood pressure, rather the objective would be: The student will list five reasons for taking a blood pressure.

Performance objectives should be stated in terms of performance, or measurable behavior. Note, the verb will determine the level of education required in the lesson. Verbs such as develop or demonstrate show action and indicate a performance (such as with a skill).

Performance objectives need to contain information concerning the condition under which the performance will be accomplished. For example, the equipment you will provide to the student, or the conditions of a written test should be defined.

The objective must include the criterion on the basis of which satisfactory attainment of the objective will be judged. For example, the percentage of correct answers required to obtain a passing grade (80% or better), or how a skill performance will be evaluated. A skill performance might be evaluated through use of a checklist, the percentage of correct marks for performance should be indicated. For example, the demonstration will be considered successful if all items on the checklist are marked with a yes.

Each performance objective should contain only one objective, one type of performance, and any statement should be written so it can easily be understood by both the teacher and students.

Idaho CNA and EMT classes have well defined curriculum guides. These guides are competency based with well defined and well written performance objectives and enabling objectives and are a great assets when writing your lesson plans.

A good guide for performance objectives is to give the

- Conditions: Given a blood pressure cuff, stethoscope, chart, fellow student, and black pen...
- Performance: the student will take a blood pressure...
- Criterion: The performance will be considered successful if the blood pressure reading is =/- 4 mm HG of the rater.

The conditions under which the student will be expected to perform the objective are clearly spelled out, the performance is delineated and how the performance will be evaluated is clear. Students will know what is expected of them and the passing or failing of a student is defensible and objective.

Enabling Objectives

Enabling objectives are the skills and information that support the performance objective. It is something the student needs to know or know how to do in order to perform the performance objective. For example, if the performance objective is proper

administration of an injection, an enabling objective might be: List four kinds of injections commonly administered. Objectives are most useful to students and for evaluation purposes when they are stated in behavioral forms. This way, both the student and teacher know exactly what must be done for student success.

The approach of stating learning requirements in specific task oriented behavioral terms is called competency based or criterion referenced training.

Sample performance and Enabling objectives:

Performance Objective

- Given information about oral communication and the impact of communication on interpersonal relations, the student will display effective communications. The display will be considered successful if all items on the checklist are marked yes.

Supporting Enabling Objectives:

- List three components of an oral communication.
- List three occurrences that might cause interference with an oral communication that results in miscommunication.

Performance Objective

- Given information about how to take a radial pulse, a watch with a second hand, a peer, a black pen, and a chart, the student will take a radial pulse following the procedure designated in class. The pulse taking will be considered successful if all items on the checklist are marked yes and the results are +/- 4 beats per minute of the teachers results.

Supporting Enabling Objectives:

- Demonstrate placement of three fingers over the wrist, inner aspect.
- Count pulse for one full minute.
- Chart the correct reading in the correct spot on the form.
- Sign and initial the chart form.

Lesson Development

Once you have determined what your objectives are and have planned how to introduce them to your students, you need to plan how to reach the objectives, or what

teaching methodology(ies) and learning experiences you will use to relay the information to students. There are resources available that contain teaching tools and methodologies. Some of the Idaho State Curricula Guides have methods and learning experiences required or suggested. Published textbooks and videos have suggestions also, but beware of standards set in them, they are meant to cover many States and may not match with the established guides and procedures for Idaho. Published material should be used to supplement, not replace required curricula for Idaho.

Your objectives for your course will guide your choices for selection of teaching methodologies and learning experiences. Once you determine the objectives, with student input, you will have to decide if you need to teach a skill, idea or concept, attitude, or a value. In deciding which method and lessons to use you have to also consider your classroom limitation and time restrictions.

Once all the variables have been considered you will decide on methodologies and learning lessons based on the advantages and disadvantages of each one in regard to your situation. You may find that several techniques in combination will be the answer to your specific requirements. Using a variety of teaching methods can be very effective and help maintain student interest. You may begin your lesson plan with a 20 minute interactive lecture with students, followed by a video demonstration, followed by a live demonstration with immediate supervised practice for teaching a skill. The repetition of information is good as it helps to commit the knowledge to long term memory and the immediate practice has been shown to be effective through clinical studies of brain changes that happen with learning (Funderstanding, 2006; Miller, 2004, Phillips, 2005).

The content or subject matter or concept section of the lesson plan is determined by the objectives of the lesson. The format of this content section may vary, some teachers plan the content in outline form, others write in paragraph form. Many times the technique(s) determine how you plan the content. For example, if you chose to use a demonstration, you would need to list in detail, the steps of the demonstration in exact sequence they are to be performed. You would need to include any special safety rules involved with the performance and any explanations that need to be given would need to be outlined. If you were going to use a discussion you would need to prepare a list of the key questions to guide the discussion to keep it moving. Remember, your objectives and

content guide the method and learning experiences you will use in the lesson plan. Sample lesson plan formats are available in the Appendices.

A good plan should have a space for notes in which you can make comments about how the lesson went. This is another type of evaluation device, but this time it is the plan which is being evaluated. Immediately following the class period, you should write down comments or questions you have relative to the plan and its effectiveness in helping you achieve the objectives. What things worked? What things didn't work? What things didn't get covered? What questions were raised that need further clarification? How accurate were your time allotments for the various activities? These notes will serve two purposes, 1) they can be generalized and this helps you in writing other plans, and 2) would you need to teach the same lesson at a future date, these notes can suggest needed improvements.

Resources and Materials

Lesson resources and materials include all the physical tools used in education, including teaching aids. Aids that are helpful include media, audiovisual, reading materials, machinery, equipment, tools, supplies, bulleting boards, graphs, anatomical models, and computer hardware and software. It is important to have the resources and materials listed on your lesson plan so when you look at your plan to get ready for the lesson, you will remember to set up the aids needed for that day. It is important to check your aids to make sure they are in working order and appropriate for your need. It is in poor form to plan to include a video for students, then waste time searching through the video for your desired starting point. You will loose student interest and it is difficult to bring them back to the lesson plus waste valuable teaching time.
You will use teaching resources and materials during all portions of your lesson plan from the approach, development and summary sections.

Lesson Summary

There are two major activities which occur in this section of the lesson plan. First, you summarize the lesson, and second you evaluate students' attainment of the day's objectives. The order of which you perform first does not matter there are times when an evaluation will logically precede the formal summary for pulling loose ends together,

drawing conclusions, evolving generalizations and/or reiterating major concepts. If you use key questions requiring student responses you can informally evaluate whether the lesson objectives have been met. A primary issue of important is to relate all that has gone on during the class back to the lesson objective(s) and to relate again what has occurred to past and future lessons. The summary should reinforce where the educational plan is going, where it has been, and where students should be and why they should be there.

The evaluation component is a tool for determining if the students are where they should be. The method of evaluation you select should be based on the type of objective, and the criterion listed in the performance objective. For example, if the goal is for students to attain competency in performing a skill, a paper and pencil test will not be congruent with the criterion for success. Instead, observation of student performance following a checklist would be appropriate for evaluation of student learning.

Module 7 Quiz

Fill in the blank(s) or mark the letter of the correct answer for each question below:

1. People who are experts in industry do not have to develop a lesson plan since they know the material so well.
   A. True
   B. False

2. If you have a lesson plan, you must follow it to the letter to avoid missing any information in the class.
   A. True
   B. False

3. It is important to inform adult students in advance what the objective of the lesson is, and how they will know if they are successful in the class.
   A. True
   B. False

4. List the three parts of a performance objective. _____

_____ _____

5. _____ _____ support the performance objective.

6. If the class textbook has a procedure, it is best to teach that since the text is the primary informational source for all classes.
   A. True
   B. False

7. It is necessary to list your lesson requirements for resources and materials on your lesson plan.
   A. True
   B. False

8. In the lesson summary it is important to evaluate student learning before you summarize the days lesson.
   A. True
   B. False

Module 7 Activity

Answer each question with a short paragraph or two. Your answers should be type written or computer generated in at least font 12 using Times New Roman or Arial. You should email, mail or give your answer sheet to the teacher for each module as you finish it. Thank you for your work in this class. Please feel free to include any comments for improvement, or items that helped you through the course as you move through each activity.

1. Using the class you intend to teach following this course, and your work on prior activities, write your introduction to your course. You may use any format you are comfortable with but make sure to incorporate these factors:

General Introductions

Housekeeping Details

Course Purpose and Objectives

2. Write a performance objective with the supporting enabling objective(s) for the first lesson of the class you intend to teach following this course. Make sure you include all three requirements for the performance objective.

MODULE 8: Evaluation

Performance Objectives for Module 8

- Given the information in this module the student will determine the appropriate performance test for a performance objective. The determination will be considered successful if the student can answer at least 80% or better of the questions correctly on a written examination and complete the activity at the end of this module.
- Given information in this module the student will determine the type of written examination that best measures student attainment of an enabling objective. The determination will be considered successful if the student can answer at least 80% or better of the questions correctly on a written examination and complete the activity at the end of this module.

Introduction to Module 8

Test and measurement, or assessment, of student progress is an integral part of competency-based education. In competency based or criterion referenced education, learning requirements are stated in specific task oriented terms. Objectives indicate the required performance, the conditions, and the criterion. Performance objectives outline final or end-point goals while enabling objectives support performance objectives. Assessment serves three purposes in the competency-based approach. First, assessment provides students with feedback regarding their performance relative to the standard of proficiency in the objectives. Second, the teacher can use data collected during the assessment procedure in grade assignment if the system requires more than a pass/fail assessment. A third function of student assessment is that it provides the course teacher with feedback regarding the instructional design.

Types of Evaluation

As the teacher you will be expected to evaluate students' cognitive learning. There are two levels of evaluation with which you will be concerned. The first level of evaluation is formative evaluation. This is the evaluation performed to assess learning during the course of study. As the teacher you will perform formative evaluation to assess if you need to teach more about a subject. The final evaluation is called a summative

evaluation. This evaluation is designed to assess the summation of information or learning that happened. A summative evaluation is performed as a midterm or final examination.

Formative Evaluations

Formative evaluations are the intermittent assessments you will make as a teacher, to check the level of learning during the course of your lesson. A written quiz can be a formative evaluation or a summative evaluation, according to how you choose to use it. If your purpose is to check how much students have learned, and adjust your teaching accordingly it is a formative assessment. If your purpose is to assess the total amount of learning students have gained, and grade based on the assessment with no change in your teaching plan it is a summative evaluation. Less formal formative evaluations are the questions you ask in class to ascertain understanding of the information. However, if you ask questions and do not pay attention to the understanding for all students in a class, you may leave some students behind.

Summative Evaluations

These evaluations are the most frequently used assessment tool in a classroom. Midterm tests and final tests are examples of a summative evaluation. In allied health classes such as EMT or CNA, the students will pass or fail the class based on the results of the summative evaluations.

Purposes and Benefits of Tests and Measurements

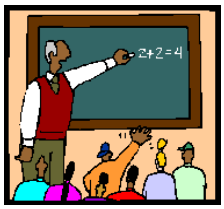
Student assessment can serve many purposes. The obvious purpose is for an assessment of the formulation of objectives and instructional methodologies.

Occasionally you will hear teachers dismiss the merits of a well-planned assessment component as undesirable. They will pursue arguments such as employers never look at a student's grades, or written examinations only encourage cramming, cheating, and unhealthy competition. Students may believe assessment measures are not necessary and have little meaning to anyone; that what a person learns is more important than his or her score on an assessment measure. Students and teachers may feel an emphasis on assessment creates a threat for students, creating stress and decreasing their ability to learn. However, most teachers at all levels of education agree that some level of assessment is necessary. The high cost of educational programs demands measurement of the education being provided. The use of assessment marks are numerous and crucial. In adult learning programs assessment marks are used to inform students and teachers of progress toward objectives. Employers who pay for education for their employees need to have a measure of their employee's progress.

Teachers should have a planned program of student progress assessment for the following purposes:

- To determine the level of knowledge, ability, or skill of the students at all times.
- To determine the level of students' skill performance at all times.
- To become aware of specific difficulties of individual students, or of the entire class as a basis for need for further instruction.
- To diagnose each student need and suggest areas which require remedial measures.
- To encourage students' learning through provision of knowledge of progress toward objectives.
- To help students acquire an attitude of, and skills in, self-evaluation.
- To estimate the effectiveness of teaching and learning techniques of subject matter and of instructional media in assisting students to reach the objectives of the course.
- To gather information needed for administrative purposes, placement, qualification, recognition, events, etc..
- To emphasize important learning topics and points.
- To improve the efficiency of the teaching-learning process.

- As a basis for grading.
- To provide a basis for setting student performance standards.
- To measure teacher effectiveness and motivate the teacher.



Student Benefits of Assessment

There are several important student benefits made possible through an effective assessment program. Some of the benefits are:

- Increases in motivation and provision of direction for student effort.
- Provision of learning and reinforcement experiences.
- Increase student accountability for learning.
- To reveal strengths and weaknesses in learning progress.
- Evaluation, What Should be Assessed and How

Many factors are involved in learning and teaching situations that should be considered when planning the evaluation component for a course. The factors can be divided between the cognitive, affective, and psychomotor domains.

Cognitive Domain

A student's knowledge of understanding of the essential information necessary to perform a given job or task successfully in an important factor. Generally this information is found in the enabling objectives for a course. Measurement of learning in this domain is primarily performed through oral or written tests which have been composed of a variety of test items. Examples of test items include multiple choice, sentence completion, true-false questions, matching questions, short essay questions and so on. One other method for a cognitive assessment is a Reaction Paper. There is an example of a reaction paper assignment in the Appendices portion of this class.

Psychomotor Domain

The student's ability to perform a given task is an important factor in health related education. This factor focuses on the manipulative performance of completing an assigned task and is made up of two components.

- First, the student's ability to follow a predetermined procedure and
- Second, the quality of the completed task, project or product. This factor is generally included in the performance objective, but may be part of an enabling objective.

The usual method of measuring performance in the psychomotor domain is an observation technique using a checklist or similar rating device to provide as much objectivity as possible. Another method is to measure the completed project or product. A rating sheet which specifies acceptable and unacceptable outcomes expressed as a "yes or no," if a step is correctly completed. The amount of work in a given time period completed by students can be a factor to be measured as a component of assessment. This can be done through observation and record keeping using a progress chart or similar device. The time required to complete tasks can be a factor to consider in planning an assessment component in your class. On some tasks it is important for students to be able to complete the work in a set period of time. To use this method a time table should be developed and the time required to complete a task or tasks should be recorded for each student.

Affective Domain Development

Several factors are in the affective domain and are discussed below.

- Work habit development- A student's work habits are an important consideration in a professional technical class and should be considered when developing an assessment system. Research indicates many people lose their jobs because they lack good work habits such as attendance, initiative, following directions, industriousness, seeking advice, planning activities carefully, accuracy, concentration, accepting opinions of others, cooperative attitude, and organizational abilities. Desired behaviors can be measured using observation and rating with a rating device that describes levels of behaviors for each work habit.
- Personal growth characteristics- Student's personal growth is another important factor that can be assessed. Personal growth factors include friendliness, courtesy, neatness, self-confidence, poise, self-control, appearance, honesty, and a tendency to act or react in a particular emerging behavioral pattern. Measurement of desired behaviors can be performed through use of a descriptive rating device and observation technique.
- Interest- a student's interest in the training or occupation area and in the instructional system is another important factor that can be assessed. Interest is indicated by a student's behavior such as volunteering for tasks, promoting the program, making statements of preference of choice, etc.. Interest is usually measure by pencil and paper self-report inventories or tests, through direct questioning, and by observation using a rating device.
- Attitude- A student's attitude or degree of positive or negative affect of feeling associated with the educational program and or occupational area is also an important factor for assessment. It is a generally accepted principle that a person must have a positive attitude toward the instructional program to internalize the information. Attitude can be measured through a pencil and paper self-report inventory or test through direct questioning and by observation using a rating device which describes the expected behaviors.

- Creativity- a student's ability to come up with unique solutions to problems or new and different approaches to situations is another assessment factor. Measurement is generally performed through use of observation with a rating device or record form.
- Safety- Students' attitude toward understanding and practicing of safety is an important factor to be included in the assessment component. Three methods of assessment can be used to assess this factor. A pencil and paper test can be given, a performance test can be given, and through observation using a rating device.

Most of these factors are involved in the objectives for your programs. There may be other factors in addition to the ones above that should be assessed, but remember tests and measurements should be developed specifically for the objectives of the program.

The method of instruction used should be considered in test development. As the teacher you should determine the method of instruction, the domain selection and level of learning desired. The assessment must be consistent with the outcomes desired. Student assessment must always follow a logical flow of activity from task analysis, curriculum materials, teaching methods used, and level of learning desired.

Test Construction

Test construction plays an important part in the accuracy of measurement of learning. Tests constructed without congruency between the level of learning required, teaching methods used, and objectives will not provide the measurement required and become an exercise in futility for the teacher and the students.

Teachers may try to appear as a tough teacher by making tests hard, or tricky. Reality is tricky test questions such as multiple-choice with two correct answers with one being the best, or tests with a reading level above the general student ability level only measure student test taking ability, not the learning that has occurred in class.

Multiple Choice Tests

Multiple choice tests are often used for measuring all levels of cognitive achievement. The following information provides a rationale and assistance in the construction of multiple choice tests and questions.

Advantages: Multiple choice questions can assess different levels of cognitive achievement. Scoring of these tests is objective, relatively fast, and the tests are useful for diagnostic purposes if incorrect answer choices cover common errors and provides a basis for productive post-test discussions (i.e. why incorrect responses were wrong as well as why correct answers were right).

Limitations: Questions are difficult and time-consuming to construct and question wording may not convey the intended meaning to all students. Additionally, students may misinterpret questions through reading too much into them.

Multiple Choice Test Construction

- The initial part of a multiple choice question is the stem. Stems should be complete sentences with specific information that allows for students to begin thinking of an answer. Stems are usually written before the answer choices. Before writing the stem, identify one informational content item, questions should only test one problem each, although there may be several steps to the problem solution.
- Avoid stereotyped phraseology which will elicit a rote response.
- Avoid nonfunctional words that do not contribute to the meaning of the question. For example use: One important vital sign to take when assessing a patient for an infectious process is (1) core body temperature (2) oxygenation level (3) orientation to time and date instead of: Vital signs may be significant for a patient with an infectious process. One of them is (1) core body temperature (2) oxygenation level (3) orientation to time and date. Important to note is irrelevant

material should not be used since this will increase the chance of testing reading comprehension ability not informational learning.

- Include information for the question in the stem, not the answer choices. It would be better to give a definition of a term in the stem, with answer choices that it would be to give the term with definitions in the answer choices.
- Do not use negative words in the stem. The use of negative words in the stem usually requires the correct answer be a false statement. Students are, in general accustomed to looking for positive answers and the use of a negative may trick students into choosing the incorrect answer.
- Avoid using irrelevant clues to the correct answer choice. For example using the word injection in the stem and the question choices have only one choice having to do with intramuscular injections.
- After writing a stem the question choices follow, writing these choices is not an easy task. Incorrect answer choices are called distracters.
- The use of three or four well constructed options is preferable to constructing a poorly worded fifth choice. All answer choices should be grammatically correct with a consistent use of terminology. Use a consistent number of distracters once you have chosen how many to use. Use capital letters for answer choices since they are more easily discriminated by the students.
- Answer choices should be listed on separate lines.
- Distracters should be incorrect, but plausible responses to the stem.
- Answer choices should be comparable in length, complexity and grammatical form. Avoid words such as always, never, and all. Often the correct answer choice may be longer than the other choices to ensure the truthfulness of the correct choice. Experienced students will be able to choose the correct answer based on this clue. Avoid putting in incorrect long answer choices to trick the students, tests should be developed to obtain an honest measurement of knowledge gain.
- Avoid using answer choices, "all of the above," "none of the above," "both a and e above," etc., when the stem asks for the best answer. A question asking for the best answer implies all the answer choices have a degree of truth. The use of the

answer "all of the above," is not recommended since if a student recognizes one answer choices as wrong or two of the answer choices as correct, they have the answer.

- Once you have the answer choices written make sure you randomly vary the location of the correct answer. Experienced students may be able to learn a teacher's tendency for one answer choice position for a correct answer, or know that the first answer choice is rarely the correct answer (as this is a tendency for test writers).

Keeping statistically data on your test once it is finished will add reliability and validity to your questions. For a handbook on test construction from Cornell University, visit http://www.clt.cornell.edu/campus/teach/faculty/Materials/TestConstructionManual.pdf .

Evaluation in Cooperative or Collaborative Learning

Evaluation of cooperative group projects should be determined by clearly established criteria, this way group members know they have been successful when they meet the criteria. Part of the criteria should include how well collaboration occurred among members. Group members earn a higher score when they work with each other and help each other to learn.

Individual grades can be given for each member's achievement. For example, a written test can be given with each person receiving a score as their grade. If all members in the group achieve a score above a certain pre-determined score, then each member of the group receive a bonus point or points attached to his or her individual score. In other words, the teacher awards both individual and group scores; the combination of the scores will be the individual's grade.

Other ways for assigning grades follow:

Use individual scores and assign additional points depending on where the score fell in a set of pre-determined range of scores. For example, a score of 70-75 earns 1 point; a score of 76-80 earns 2 points; a score of 81-85 earns 3 points, etc. Using this system, a person with an actual score of 82 will receive a final score of 85.

Individual bonus points are awarded for improvement. If an individual's score is higher than in the past, points are awarded. If everyone in the group improves, a higher number of bonus points are given to each person.

Randomly selecting one person's score and that becomes the score for each member in the group. An average of a groups' academic scores plus collaborative skill performance scores equals the final grade. Each person receives an individual score plus points for collaboration skills that were pre-determined. Each member knows how the collaboration skills will improve their final grade.

Evaluations in collaborative learning situations are performed through negotiations between the group and the teacher. Each group should individually develop a grading process with the teacher prior to beginning their plan.

Performance Assessments

Three basic types of assessment satisfy the three functions identified in the introduction. These assessments are pre-testing (formative), diagnostic testing (formative) and performance testing (summative).

Pre-testing students to determine skills they bring to the learning situation is highly desirable. Results of pre-testing provide the basis for decision making. If a student possesses the competencies necessary for a performance objective, the student may be certified as having successfully performed the objective and move to another performance objective without having to go through the related learning activities.

Diagnostic testing is used primarily to find the areas in which the student needs help to master a task. Diagnostic tests aid the teacher in identifying problem areas for the student. With this information, the instructor can adjust instruction to meet individual student differences.

Performance testing can be done using two methods. Criterion-referenced tests are used to determine as accurately as possible when a student has reached an acceptable level of performance. In criterion-referenced testing students are tested on their ability to meet the performance objective. On the other hand, norm-referenced tests determine how well the student performs a given task relative to other students in the class. Criterion-referenced

testing separates students along a time scale, while norm-referenced testing separates students along a grading scale.

This is not meant to imply that criterion-referenced testing does not allow for individual differences in performance. The extent of difference is not nearly as great as in the norm-referenced situations. In criterion-referenced testing there is a predetermined proficiency level against which students are compared. The level may be set high, however teachers will find there is room at the top of the scale for a rank order of students.

To increase student morale and motivation, students who surpass a predetermined minimum proficiency level can be awarded a superior rating, or even highly superior. Students who meet the standard might receive a satisfactory rating, and students who do not meet the minimum level of proficiency should be given a failing grade or an incomplete. The incomplete grade would indicate the student will be given the opportunity to work toward reaching a satisfactory performance level.

It is necessary to measure the learning that occurs in a class. In a class with many skills such as EMT, CNA, or a nursing class, performance assessments play an important part in the measurement of student accomplishment. Student assessment in performance-based teaching is reliant on a criterion-referenced measure. Assessments are based on the performance objective and are designed to measure student attainment of stated objective(s). Properly written-competency based objectives give clear, complete directions to students about required performance and how their performance will be evaluated. Performance-based assessment may be accomplished by 1) process testing, 2) product evaluation, or 3) a combination of the two.

Process Testing

When the procedure is most important, and/or the end product is not easily measurable, process testing is the proper assessment method to use. Process testing is used to assess each step of a task. The student is rated on the degree of acceptability of each step accomplished. Process testing is the most time-consuming of the three types of performance testing; however, it yields the most comprehensive assessment results. There is an example of a process test in the Appendices of this course. The example includes a

process test checklist. Note that the items in the checklist mirror steps in the performance objective.

Product Evaluation

When the final product is most important, and/or the process is not easily measurable, product evaluation is the proper method of assessment. Product evaluation is used to assess the student on the degree of acceptability of the completed product. Although product evaluation is less time consuming, the instructor cannot easily determine if the student has performed each step of the process correctly. Instead, the teacher rates the final product, such as charting or reports. There is an example of a Product Evaluation in the Appendices section of this class; you will see an example of an appropriate product evaluation. The checklist consists of items which assess the product, not the process.

Combination Assessment

When both the process and the final product are critical and measurable, combination assessment is the proper method to use. Combination assessment is used when the teacher evaluates the critical processes before examining the final product. This assessment procedure has teacher checkpoints built in so that critical processes are not ignored prior to the final product review. The example in the Appendices section of this class shows a task taken from the Tractor Mechanics Catalog and provides an illustration in which the teacher checkpoints within a process checklist are valuable and critical. The checkpoints on the checklist inform the student that the teacher will assess the process at specified points in the performance.

Donald Kirkpatrick's Training Evaluation Model

At times, you will need to evaluate the overall effect and/or effectiveness of your training program. One of the most widely used models for evaluation of training was written in 1959 by Donald Kirkpatrick. He later published his model in his book, Evaluating Training Programs in 1975, and again in 1998 in a book called Evaluating Training Programs: The Four Levels'. This model is considered an industry standard by human resource and training communities. This model is diagrammed below:

What is Measured	Description	Examples	Relevance
Reaction	How students felt about the training.	Most post secondary schools have these, they are teacher evaluations, smiley sheets, SRI's, etc.	A low cost way to measure student satisfaction with the course.
Learning	Measurement of the increase in knowledge.	The typical assessment at the end of a class, can be a written examination or a demonstration of skills or both.	Relatively simple to set up. However, difficult to measure contextual learning.
Behavior	Measurement of the applied, or contextual learning.	Observation and interview over time to assess change in work skill behaviors.	Involves work place employees and time.
Results	Effect on the business or industry by the trainee's learning.	Challenge is to relate business or operations changes to the trainee.	Business and industry effectiveness is hard to evaluate from the perspective of one or a group of employee training.

More recently it has been suggested that evaluation must go beyond these four levels to measure the return on investment for the industry or business. However, the results level would investigate a return on the investment in training. As a teacher your main level of concern will the reaction and learning levels.

Module 8 Quiz

Fill in the blank(s) or mark the letter of the correct answer for each question below:

1. A midterm test is a/an _____ evaluation.

2. Please summarize why student assessment is important in a brief paragraph.

3. List three student benefits from a well planned assessment process.

4. Give an example of how you would evaluate for learning in the cognitive domain.

5. Give an example of how you would evaluate for learning in the psychomotor domain.

6. Give an example of how you would evaluate for learning in the affective domain.

7. List two advantages of using multiple choice questions.
_____ _____.

8. When the procedure is the most important you should use _____ evaluation.
   A. Product
   B. Process
   C. Combination

9. The use of a negative word in a stem of a test question usually requires the answer to be a true statement.
   A. True
   B. False

10. The evaluation of a psychomotor skill must be subjective.
   A. True
   B. False

Module 8 Activity

Answer each question with a short paragraph or two. Your answers should be type written or computer generated in at least font 12 using Times New Roman or Arial. You should email, mail or give your answer sheet to the teacher for each module as you finish it. Thank you for your work in this class. Please feel free to include any comments for improvement, or items that helped you through the course as you move through each activity.

1. Review your performance objective and the enabling objective(s) you wrote from module 7. Write a short (5-10) question written test you would use in a summative evaluation of student learning in your class. Be sure to include the directions for students for the different types of questions you use.

2. Reflect on the class you want to teach after taking this course. Please give an example of a cooperative learning and a collaborative learning situation you might use, and how you would assess individual student learning in each.

COURSE SUMMARY

Congratulations you have made it through the course and are ready to go forth and teach. The first time you teach a class takes a considerable amount of planning and preparation. Be patient, the next time is less work because you will have your plan established on which you can build. Remember, your plan is not static, but you should reflect on how it worked each time you teach to keep it interesting and up to date. It is important to stay abreast of changes in new learning theory and modify your lesson plan as new information becomes available.

In Module one you learned about adult learners and how their learning needs differ from children. Personalities, life challenges, and needs change as we age and consideration of this will help you teach in the adult classroom. Your new knowledge of adult characteristics will serve you well as you develop and update your teaching plans.

Module two information gave you basic knowledge of communication and theory to help you to effectively bridge knowledge to others. Communication in the classroom is key in how well the educational program works and the learning students will incorporate.

The information in Module three about styles and theories of adult learning provides you with a basic understanding of how to reach all the students in your classes. Each student can learn, but it may take a different approach to reach that person. You will learn through experience in each class you teach!

Teaching aids are extremely important to any class, but especially in classes heavy on psychomotor skills. The equipment used in health care often seems mundane and boring to an expert in the field. However, teaching a class of novice students to take a blood pressure or apply a neck brace requires new, and often intimidating equipment for students. The information in Module 4 will help you to not only choose teaching aids used in the classroom, but to thoughtfully choose and use equipment.

The teaching methodologies in Module five are by all means a comprehensive review of all teaching methodologies, you will use. You will find others that work well in your classroom, and may even develop your own. As with any process, a good basic background gives you a firm beginning place on which to build.

Public presentations can be scary and it is no different in a classroom. If you take time to reflect on your presentation style and make improvements each class, your students will benefit.

Module six provided basic information about classroom presentations and what to do if you have difficult students. Take this information and grow your knowledge with each class you teach.

Module seven's information on lesson planning is especially important to you as a novice teacher. Once you develop your style of planning, you will be set for the rest of your teaching career. The tools provided in this module are a beginning. The important part is that you plan. A brief outline of a class will help you know objectives, but the body of the lesson plan, the how's and details will be one of the most important teaching tools you have.

Education is expensive and the move is on by employers and students for measurement of its value. Evaluation standards must be pre-determined in any class in which you will grade a student's performance or learning. If you have a standard, that students know prior to learning, it will help the students to know what is expected of them and give you a defensible argument for a grade!

Information in Module 8 provided you with basic evaluation information on which you will build in the future.

Good luck with your teaching career, there are few things in life that can provide the type of satisfaction one gets from seeing the excitement and enthusiasm of students as they learn information that will help them improve. The final activity follows. Have fun putting together all the information you have learned into this final challenge.

Final Activity

Now is the time to bring all the information together and get started on your first lesson plan. This is an exciting activity in which you get to use all the learning you have done with this course by putting together a lesson plan and then teach it to a group of novice students! The form that will be used to evaluate your lesson plan and teaching is linked and you can review it by in the Appendices portion of this course.

Here's what you are expected to do. Develop a lesson plan for a short teaching objective, make the lesson you are going to teach less than one hour; 1/2 hour is preferred. Incorporate everything you've learned in these modules. Use experiences you've had or the advice of experienced teachers, but be mindful of concepts you have learned about adult learners and learner-centered classrooms. Use your State Curriculum Guide for the class you intend to teach following this course. You may use the format in the example lesson plans in this module or you may develop your own format, it doesn't matter, as long as you get in all the components. The Student Evaluation included in the Appendices should serve as a guide so that you will include all the parts of a good lesson plan.

Select an objective for your lesson from the Curriculum Guide, or you can write one yourself. Keep in mind as you select or write the objective the maximum time allowed for instruction.

Develop your lesson plan according to the material presented in this module. That is, make sure you have an introduction, summary and evaluation and all other components necessary for a complete plan include a time estimate for each section of your plan. Once you are satisfied with the lesson plan, submit a copy to your teacher. He or she will negotiate with you for the date, times and meeting place for you to actually, yes, actually, present this lesson to a group of students. You may possibly be able to turn in a video for the teacher to review and critique with you if there is a great distance between you and the teacher.

After you have presented your lesson, you and your teacher will constructively critique your presentation using the Student Evaluation Form. You should reflect on your preparation using the form before you actually teach and fill in the parts of the form that are appropriate. You and your teacher will collaborate on responses after you teach. If you are remote from your teacher and send a video to the teacher, you should evaluate

your teaching using the Student Evaluation Form and send that to your teacher with the video.

If you teach in person for your teacher, a recommendation for self-evaluation is to videotape your presentation so you can watch and reflect on how you performed. If you video yourself take that video home, lock everybody else in your household out of the TV room play the video (not FF, regular speed, please) and critique yourself. Don't be hard and cruel on yourself, but look for ways that you could improve your delivery of information or ways in which you could show more empathy for students, or techniques you could use to involve the adults, in their own learning.

Best wishes to you. May you always enjoy teaching!

APPENDICES

Example of a Process Testing Checklist

Task: Take and Record Respiratory Rate

Performance Objective: Given a patient, watch with a second hand, charting sheet, and a patient, the student will take a respiratory rate and record the findings. The taking and recording will be considered successful if all applicable items on the checklist are rated yes.

Process Testing Performance Checklist for Counting Respirations

Performed Correctly?	YES	NO
1. Did not indicate to person (resident, client, patient) that respirations were being counted.	____	_____
2. Observed rise and fall of person's chest and counted respirations for 1 minute.	_____	_____
3. Noted rhythm and characteristics of breathing.	_____	_____
4. Assisted person to comfortable position as needed.	_____	_____
5. Record as directed.	_____	_____

Example of a Product Evaluation Checklist

Task: Cook vegetables by boiling, simmering, and steaming

Performance Objective: Given necessary equipment, supplies and vegetables (fresh, frozen, canned or dehydrated as selected by the teacher), plus standardized recipes for boiling, simmering and steaming vegetables, the student will prepare a minimum of one vegetable dish using each method. A checklist will be used to rate performance.

Product Evaluation Performance Guide:

1. Gather supplies and equipment.
2. Prepare vegetables for cooking.
3. Add required amount of liquid and seasoning in cooking pot.
4. Heat liquid to boil, simmer, or steam as required.
5. Place vegetables in cooking pot at required time for method used.
6. Cook covered or uncovered as required for vegetable type.
7. Cook for required length of time.
8. Remove from heat.

Product Checklist:

Met Requirements:	**YES**	**NO**
1. Vegetables consisted of regular, unbroken, even shaped pieces	_____	_____
2. Vegetables were of correct size	_____	_____
3. Vegetables had good color, bright, even, clear, fresh.	_____	_____
4. Vegetables contained proper moistness; not dry, or watery.	_____	_____
Interior		
1. Had good texture	_____	_____
2. Had good color	_____	_____

Example of a Product Evaluation Checklist (Cont)

Met Requirements:	**YES**	**NO**
Palatability		
1. Had good flavor, pleasant and true.	_____	_____
2. Had correct temperature	_____	_____
Portion		
1. Provided adequate portion	_____	_____
2. Served attractively	_____	_____

Example of a Combination Assessment

Task: Install Rear Main Lid Seals

Performance Objective: Given a mechanic's tool set, a torque wrench, a new gasket and a seal, the student will install rear main oil seal. The new seal will be correctly placed and will hold oil, without leaking. Other parts will be correctly placed and tightened.

Performance Guide:

1. Remove oil pan and clean same.
2. Remove all traces of oil pan gasket from block.
3. Remove rear main bearing cap.
4. Loosen other main bearings to allow crankshaft to drop slightly.
5. Lubricate top half of new seal and put in place.
6. Coat outside of new seal with sealing compound and put in place in rear main cap. Take care not to get compound on lip of seal.
7. Lubricate lip of seal with engine oil.
8. Put rear main cap (with seal) in place.
9. Reinstall oil pan with new gasket and sealing compound.

Combination Checklist:

Met Standards:	**YES**	**NO**
1. Removed oil pan and cleaned	_____	_____
2. Removed all traces of oil pan gasket	_____	_____
3. Removed rear main bearing cap	_____	_____
4. Loosened other main bearings to allow crankshaft to drop	_____	_____
5. Pulled out old seal	_____	_____
6. Lubricated top half of new seal and put in place	_____	_____
7. Coated outside of new seal with compound and put in place rear main cap	_____	_____
8. Took care to not get compound on lip of seal	_____	_____

Example of a Combination Assessment (Cont).

Met Standards:	**YES**	**NO**
9. Lubricated lip of seal with engine oil	_____	_____
10. Torqued main bearings	_____	_____
11. Reinstalled oil pan with new gasket and sealing compound	_____	_____
12. New seal is correctly placed and holds oil without leaking	_____	_____

Example of a Reaction Paper

Asking students to write their reactions to a lesson and the information given in that lesson is a way to determine if the concepts of the lesson were understood. Pass out a paper about five minutes before the class is over. Ask students to write their name on the paper and answer the questions on the paper. Students should be limited to the class time left and hand in the paper to the teacher before leaving class. See the sample paper below.

Reaction Paper

Name: Date:

1. List or describe the most important concepts (points of information) you gained from class today.

2. How will you use these concepts? (You could substitute a key question based on the subject of the lesson taught).

Please turn your answers into the teacher before leaving class. Thank you for taking time to provide your reactions. The results will provide information on which to base further teaching needs and methods.

Teaching Plan Outline

(Use at least one for each section/task; may use more if required)

Facility:

Address:

Instructor:

Date:

Time Estimated for Didactic training _____ Hours

Time Estimated for Clinical training _____Hours

Total Time: _____ Hours

I. Overall Performance Objective:

Given: (include the equipment the student will be provided, the source of the information, and the conditions the student will be expected to perform under).

The student will: (specifically outline the procedure that the student will be expected to do).

Performance will be considered satisfactory if: (Specifically spell out how the performance will be evaluated.

II. Enabling Objectives

Include an enabling objective for each task to be completed to reach the performance objective. There can be as many enabling objectives as required for each section. Be specific and complete.

III. Time Estimate

Include how much didactic time and how much clinical (lab) time as needed for this section.

IV. Methods/Resources

Include instructional methods. Specify what the instructor will do-what the student will do (assignments). List the resources that you will use including the text.

V. Evaluation

Include any tools that will be used for assessment- explain specifically how the student will be evaluated

Notes/Comments:

When you develop your plan be sure to include enough space to make comments and notes about the effectiveness of the plan.

Example of a Lesson Plan

Lesson Name: _____

Performance Objective:

Enabling Objectives	Content	Time Line	Methods/Resources	Assessment
Write in objectives and share with the students	Outline key concepts and major points	Write in the time for each topic, concept, or subject	Provide the methods and what you will do as the teacher and what activities the students will do. List the resources you will need for the lesson	Write in how and when the assessment will performed. Include the tools and methods required for the assessment.

Instructor Development Course Student Evaluation

_____ _____ _____
Name Date Topic

Video Yes___ No ____

Level of Performance Key
X = fully demonstrated P = partial demonstration
O = not demonstrated in correct manner NA = not applicable
Part One: Preparing to Instruct

A: Preparation
Completed preparation activities in time to meet 8 week schedule. ___
Met course objectives. ___
Ensured required training equipment and training aids were set up in advance and were in proper working order. ___
Ensured required handout materials were available for all students. ___
Consistently followed the lesson plan or explained to the students any deviation. ___

Part Two: Instructing the Class

B. Gaining participation
Encouraged participation. ___
Referred to participants by name. ___
Used positive reinforcement techniques. ___
Reacted appropriately to both minimal and overt cues. ___
Put participants at ease. ___
Maintained control of classroom situation. ___
Generally uses participants as resources. ___
Used nondiscriminatory language and treats participants in an unbiased way. ___
Handled classroom problems in an appropriate manner. ___
Turned negative classroom situation into positive learning experiences. ___

C. Platform Skills
Managed their nervousness so as not to detract from learning. ___
Maintained equal eye contact with students. ___
Used natural and nondistracting gestures and movements. ___
Spoke in clear and audible voice, with a variety of inflections. ___
Demonstrated a positive attitude toward the subject matter. ___
Used words that participants understand. ____

D. Content and Sequencing
Reviewed the logistics of the course at the start of class. ___

Provided content and procedure overview at the start of the lesson. ___
Provided course and lesson objectives for each student.____
Adhered to a specific schedule. ___
Presented all material accurately. ___
Presented all material thoroughly. ___
Presented all material in a proper sequence. ___
Was able to demonstrate flexibility by deviating from course outline and schedule when necessary. ___

E. Questioning Techniques
Provided opportunities for questions and reviews. ___
Used open questions to solicit response from participants. ___
Used closed questions to end discussions. ___
Used questions to test for knowledge, skills, and attitudes. ___
Provided correct and concise answers to questions asked by participants. ___
Was able to answer questions asked, offered to report answer back to students. ___
Answered questions non-defensively. ___
Occasionally referred questions back to participants. ___
Occasionally guided participants to reach answers themselves. ___
Generally handled irrelevant questions appropriately. ___

F. Training Aids
Used training aids so that they add to the learning experience. ___
Demonstrated proficiency in using training aids. ___
Used alternative training aids, as necessary. ___

Part Three: Evaluating Instruction
G. Participant Evaluation
Consistently provides feedback to participants, as required. ___
Completed a critique of his/her own performance. ___

COMMENTS:

Evaluator: _____

Level of Performance Key
X = fully demonstrated
O = not demonstrated in correct manner
P = partial demonstration
NA = not applicable

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